

Title (en)
Rechargeable Subsea Force Generating Device and Method

Title (de)
Wiederaufladbare Unterwasser-Krafterzeugungsvorrichtung und -verfahren

Title (fr)
Dispositif et procédé de génération de force sous-marine rechargeable

Publication
EP 2199538 A3 20130109 (EN)

Application
EP 09178143 A 20091207

Priority
US 33866908 A 20081218

Abstract (en)
[origin: EP2199538A2] Method and device to be used for resetting a pressure in a low pressure recipient (60) connected to a subsea pressure control device. The device includes the low pressure recipient (60) configured to have first (77) and second (76) chambers separated by a first piston (74); a reset recipient (70) configured to have third (86) and fourth (88) chambers separated by a piston assembly (80), and the piston assembly (80) includes a second piston (82) having first (84) and second (100) extension elements that extend along a direction of movement of the piston assembly (80). The third chamber (86) has an inlet (90) configured to allow the hydraulic liquid to enter the third chamber (86) and an outlet (108) configured to allow the hydraulic liquid to exit the third chamber (86), and the fourth chamber (88) has an inlet (92) configured to allow the hydraulic liquid to enter the fourth chamber (88) and an outlet configured to allow the hydraulic liquid to exit the fourth chamber (88).

IPC 8 full level
E21B 33/064 (2006.01); **E21B 33/035** (2006.01)

CPC (source: EP US)
E21B 33/0355 (2013.01 - EP US); **E21B 33/064** (2013.01 - EP US); **F15B 1/24** (2013.01 - EP US); **F15B 21/006** (2013.01 - EP US); **F15B 2201/205** (2013.01 - EP US); **F15B 2201/31** (2013.01 - EP US); **F15B 2201/40** (2013.01 - EP US); **Y10T 137/86928** (2015.04 - EP US); **Y10T 137/87008** (2015.04 - EP US)

Citation (search report)
• [XY] US 6192680 B1 20010227 - BRUGMAN JAMES D [US], et al
• [Y] US 4205594 A 19800603 - BURKE MARTIN F [US]
• [A] US 4864914 A 19890912 - LEMOINE JOSEPH L [US]
• [A] US 3436914 A 19690408 - ROSFELDER ANDRE M
• [A] US 4076208 A 19780228 - OLSON RICHARD A
• [A] US 6244560 B1 20010612 - JOHNSON CHRIS DALE [US]
• [A] WO 2008096170 A1 20080814 - NAT OILWELL VARCO LP [US], et al
• [Y] DE 10143013 A1 20030320 - BOSCH REXROTH AG [DE]
• [A] DE 102005043571 A1 20070322 - BOSCH REXROTH AG [DE]

Cited by
RU2616955C2; CN105705725A; EP2769053A4; US9194509B2; WO2013059430A1; WO2014004356A1; WO2015041904A3; WO2015009512A3; WO2014209909A1; WO2013007425A3; WO2015171842A1; US9228738B2; US9383093B2; US9383094B2; US9388976B2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
EP 2199538 A2 20100623; EP 2199538 A3 20130109; AU 2009245885 A1 20100708; AU 2009245885 B2 20160714; BR PI0905418 A2 20110621; CA 2687000 A1 20100618; CA 2937629 A1 20100618; CN 101793132 A 20100804; CN 101793132 B 20150603; MX 2009013451 A 20100809; MY 154943 A 20150828; SG 162691 A1 20100729; US 2010155072 A1 20100624; US 8220773 B2 20120717

DOCDB simple family (application)
EP 09178143 A 20091207; AU 2009245885 A 20091209; BR PI0905418 A 20091218; CA 2687000 A 20091203; CA 2937629 A 20091203; CN 200910262097 A 20091218; MX 2009013451 A 20091209; MY PI20094926 A 20091119; SG 2009083874 A 20091216; US 33866908 A 20081218